

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.





May 1934

## AN IMPROVED INSECT CAGE FOR USE OVER FLOWERPOTS

By J. N. Tenhet, Division of Truck Crop and Garden Insects,  
Bureau of Entomology, U. S. Department of Agriculture 1/

For many years different types of insect cages have been utilized by entomologists, with varying success, since most of the available types of cages have had serious defects. The majority of them have been so tight that ventilation was inadequate, and the contents consequently subjected to abnormal conditions of temperature, humidity, and light; or, they have been too large and cumbersome; or they were constructed in such a manner that examination of their contents was slow and difficult; or they were so expensive to construct that an adequate number of cage units could not be made available.

During the progress of investigations with the sand wireworm (Horistonotus uhleri Horn), at Fairfax, S. C., in 1932-33, a cage was developed which overcomes many of the defects found to be inherent in other cages. This cage is simple in design, light in weight, and very tightly constructed; yet it allows satisfactory ventilation at all times. Moreover, it approaches the ultimate objective of maintaining the same temperature and humidity inside the cage as outside. Also, it is very compact, and the cost of construction is very moderate.

One of the oldest and most commonly used insect cages is the glass lantern globe, placed over a plant growing in a flowerpot, with the upper end of the lantern globe covered with cloth. This cage possesses the advantages of simplicity, good visibility, ease of examination, and cheapness, but the ventilation is very poor, moisture often condenses on the glass, it overheats the contents when placed in the sun, and certain insects sometimes burrow under the edge of the glass in contact with the earth and escape.

The cage here presented (figs. 1 and 2) was designed to displace the lantern-globe cage and has all of its advantages with none of its defects. It is constructed entirely of wire screening (any desired mesh may be used), and it can be quickly, easily, and cheaply constructed by almost any person possessing a slight mechanical aptitude.

---

1/ Credit for a large share in the development of this cage is due E. W. Howe, Junior Entomologist; resigned August 31, 1933.

### Construction

The cage consists of a simple truncated cone of wire screen, the bottom of the cage being approximately one eighth inch greater in diameter than the flowerpot upon which it is to be used.

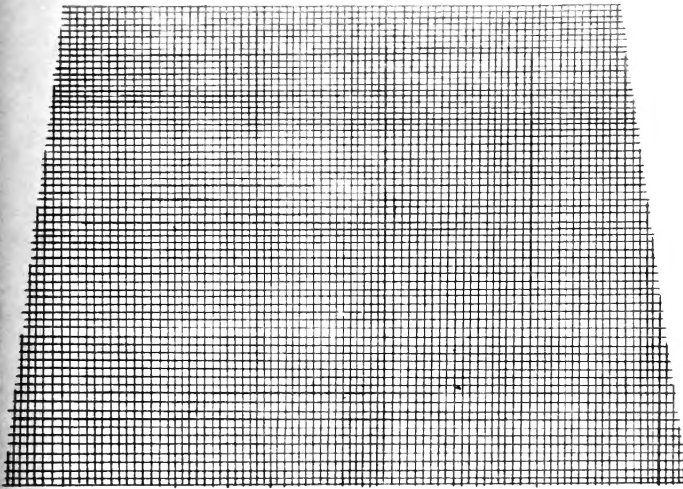
All seams of the wire screen are sewed with heavy linen thread, employing a machine used to sew heavy leather (such as is found in any shoe or harness shop). Each seam is double stitched and then given two coats of shellac to protect the thread from the weather.

The top of the cage is formed by cutting a disk of wire screening about one inch greater in diameter than the top of the truncated cone, and then forcing the disk into the top of the cone and sewing it in place.

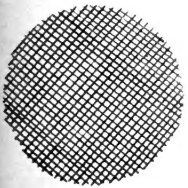
### Operation

This cage is very simple to operate. In actual use the desired insects are placed upon a host plant growing in a flowerpot, and the cage is then lowered over the pot and pushed down until a close contact is made with the rim of the flowerpot. The cage does not need to be fastened to the flowerpot with rubber bands or string, yet it remains firmly in position and can be readily removed to permit examination of the cage contents.

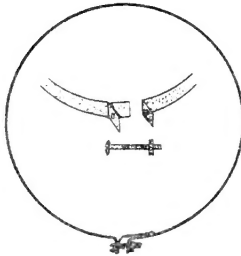
Although it is merely pushed down over the top of the flowerpot, this cage is tight enough to retain all but a very few insects. Some of the Elateridae, however, are extremely difficult to keep within cages, since they have a habit of forcing their way through the smallest crevice. To prevent the escape of such insects, a metal band (for detailed construction see fig. 1) may be placed around the cage, over the rim of the flowerpot, and quickly secured by a stove bolt.



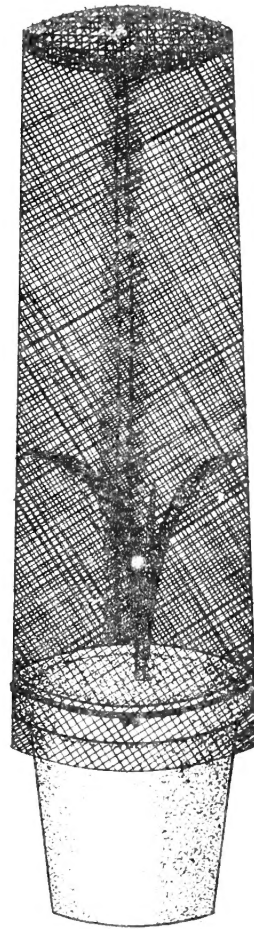
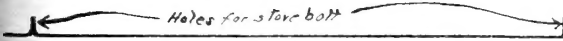
*Body of Cage*



*Top of Cage*



*Detailed Construction  
of Locking Band.*



*Cage in Use on  
6 inch Flower Pot.*

Figure 1.--Details of construction of improved insect cage.



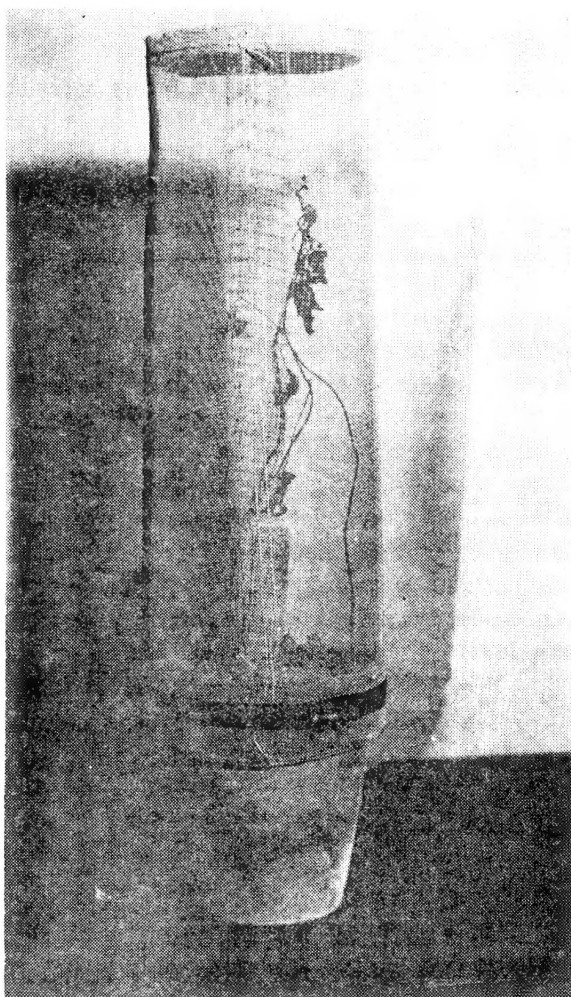


Figure 2.--Insect cage in position over flowerpot.

